

## WHAT IS CLAIMED IS:

1. A hydrostatic stepless transmission, comprising:
  - a hydraulic pump and a hydraulic motor, at least one of the hydraulic pump and motor being variable in displacement;
  - a closed circuit for fluidly connecting the hydraulic pump and motor to each other therethrough, the closed circuit including a pair of oil passages between the hydraulic pump and motor, one of the oil passages being hydraulically higher-pressured and the other being hydraulically depressed when the hydraulic pump delivers oil to the hydraulic motor;
  - a speed change operation device for changing output rotational speed of the hydraulic motor; and
  - a leak valve interlocking with the speed change operation device, wherein the leak valve is connected to the closed circuit so that, when the speed change operation device is suddenly operated, the leak valve allows oil to leak from the higher-pressured oil passage to an area hydraulically pressured lower than the higher-pressured oil passage, and then stops oil leakage when operation of the speed change operation device is stopped.
2. The hydrostatic stepless transmission as set forth in claim 1, wherein the leak valve prevents oil leakage while the speed change operation device is gradually operated.
3. The hydrostatic stepless transmission as set forth in claim 1, wherein the leak valve fluidly connects the higher-pressured oil passage of the closed circuit to an oil sump out of the closed circuit so as to leak oil from the higher-pressured oil passage to the oil sump.
4. The hydrostatic stepless transmission as set forth in claim 1, wherein the leak valve fluidly connects the higher-pressured oil passage of the closed circuit to the

depressed oil passage of the closed circuit so as to bypass oil from the higher-pressured oil passage to the depressed oil passage.

5. A hydrostatic stepless transmission, comprising:

a hydraulic pump and a hydraulic motor, at least one of the hydraulic pump and motor being provided with a movable swash plate so as to be variable in displacement:

a closed circuit for fluidly connecting the hydraulic pump and motor to each other therethrough, the closed circuit including a pair of oil passages between the hydraulic pump and motor, one of the oil passages being hydraulically higher-pressured and the other being hydraulically depressed when the hydraulic pump delivers oil to the hydraulic motor;

a speed change operation device for moving the swash plate;

a speed change link member connecting the speed change operation device to the swash plate; and

a leak valve having a leak oil passage for leaking oil from the higher-pressured oil passage of the closed circuit to an area hydraulically pressured lower than the higher-pressured oil passage, the leak valve including

a cylinder being movable between a valve closing position for cutting off the leak oil passage and a valve opening position for completing the leak oil passage,

a biasing member for biasing the cylinder to the valve closing position, and

a piston slidably disposed in the cylinder and interlocking with the speed change link member, wherein when the speed change operation device is suddenly operated, the cylinder is moved together with the piston to the valve open position, and then, by stopping operation of the speed change operation device, the cylinder returns to the valve closing position by biasing force of the biasing member while the piston is kept in its shifted position.

6. The hydrostatic stepless transmission as set forth in claim 5, wherein while the speed change operation device is gradually operated, the cylinder is kept in the valve

closing position regardless of movement of the piston.

7. The hydrostatic stepless transmission as set forth in claim 5, wherein the completed leak oil passage is open to an oil sump out of the closed circuit so as to leak oil from the higher-pressured oil passage of the closed circuit to the oil sump.

8. The hydrostatic stepless transmission as set forth in claim 5, wherein the completed leak oil passage is open to a depressed area in the closed circuit so as to leak oil from the higher-pressure area in the closed circuit to the depressed area in the closed circuit.

9. The hydrostatic stepless transmission as set forth in claim 5, the piston being formed therein with an orifice open to areas of a chamber in the cylinder which are opposite to each other with respect to the piston, wherein, when the piston is suddenly moved, movement of oil through the orifice is resisted so as to move the cylinder together with the piston.

10. The hydrostatic stepless transmission as set forth in claim 9, further comprising:  
a reed valve provided on the piston to open and close the orifice, wherein when the piston is suddenly moved, the reed valve closes the orifice.

11. The hydrostatic stepless transmission as set forth in claim 5, wherein the movable direction of the piston and the cylinder is substantially vertical.

12. The hydrostatic stepless transmission as set forth in claim 5, further comprising:  
a center section forming the closed circuit therein, wherein the cylinder is movably disposed in the center section.

13. The hydrostatic stepless transmission as set forth in claim 5, further comprising:

a second biasing member for returning the speed change operation device, the speed change link member and the piston to their neutral position.

14. The hydrostatic stepless transmission as set forth in claim 5, the speed change link member being a rotary member, further comprising:

a cam for connecting the speed change link member to the piston.